

Table 14: Detailed Costs for Alternative 2A

Channel Costs

Segment	Length (ft)	Sideslopes	Slope (ft/ft)	Top Width (ft)	Bottom Width (ft)	Design Depth (ft)	Q (cfs)	Velocity (fps)	Freeboard (ft)	ROW Width (ft)	Channel Excavated Volume (cy)	Channel Excavation Unit Cost (\$/cy)	Maintenance Road (sy)	Maintenance Road Unit Cost (\$/sy)	Landscape Unit Cost (\$/sf)	Landscape Cost	Land Acquisition (acre)	Land Acquisition Cost (\$/acre)	Total Channel Costs	
Baseline Road (51st Ave to L.A.C.C.)	765	5:1	0.0021	55	5	5	60	3.05	1.4	100	738	\$6.00	2040	\$7.40	\$1.50	\$114,750	1.8	\$27,000	\$181,691	
52nd Ave (Dobbins to Baseline)	4235	5:1	0.0021	55	5	5	60	2.13	3.1	100	4085	\$6.00	11293	\$7.40	\$1.50	\$635,250	9.7	\$27,000	\$1,005,832	
51st Ave (Elliot to Dobbins)	5165	5:1	0.0021	35	5	3	20	1.60	1.8	80	2989	\$6.00	13773	\$7.40	\$1.50	\$619,800	9.5	\$27,000	\$995,775	
Dobbins Road(43rd to 52nd)	7060	5:1	0.0040	35	5	3	20	2.06	2.0	80	7800	\$6.00	18827	\$7.40	\$1.50	\$847,200	13.0	\$27,000	\$1,383,400	
Elliot Road (43rd to 47th)	2825	5:1	0.0020	68	8	6	321	3.35	2.3	115	5153	\$6.00	7533	\$7.40	\$1.50	\$487,313	7.5	\$27,000	\$775,349	
Elliot Road (47th to 49th)	1805	5:1	0.0020	80	10	7	777	3.98	1.7	125	4777	\$6.00	4813	\$7.40	\$1.50	\$338,438	5.2	\$27,000	\$542,571	
67th Ave (Southern to South Mountain Ave)	8160	5:1	0.0015	60	10	5	205	2.54	1.9	105	15427	\$6.00	21760	\$7.40	\$1.50	\$1,285,200	19.7	\$27,000	\$2,069,860	
NOTE: Includes channel top width, 24ft maintenance																NOTE: Cost based on trail		NOTE: Does not include site		\$6,954,478

Culvert Costs

ID: Location, Crossing	Number of Crosings	Design Q (cfs)	Length (ft)	Slope (ft/ft)	Material / Type	Number of Barrels	Diameter/Height	Width	Unit Cost	Pipe/Box Culvert Cost	Inlet Headwall Unit Cost	Outlet Headwall Unit Cost	Total Culvert Costs
Baseline Road (51st Ave to L.A.C.C.)	1	60	110	0.0050	CBC	1	4'	6'	\$350.00	\$38,500.00	\$6,500	\$10,000	\$55,000
52nd Ave (Dobbins to Baseline)	1	60	110	0.0050	CBC	1	4'	6'	\$350.00	\$38,500.00	\$6,500	\$10,000	\$55,000
51st Ave (Elliot to Dobbins)	4	20	110	0.0050	Pipe	1	48"	-	\$160.00	\$70,400.00	\$2,000	\$2,000	\$86,400
Dobbins Road(43rd to 52nd)	3	20	110	0.0050	Pipe	1	48"	-	\$160.00	\$52,800.00	\$2,000	\$2,000	\$64,800
Elliot Road (43rd to 47th)	3	321	110	0.0050	CBC	3	4'	6'	\$1,050.00	\$346,500.00	\$10,100	\$15,600	\$423,600
Elliot Road (47th to 43rd)	2	321	110	0.0050	CBC	3	4'	6'	\$1,050.00	\$231,000.00	\$10,100	\$15,600	\$282,400
67th Ave (Southern to South Mountain Ave)	2	205	110	0.0050	CBC	2	4'	6'	\$700.00	\$154,000.00	\$8,125	\$12,500	\$195,250
													\$1,162,450

Detention Basins Costs

Basin Location	Storage Volume (Acre-ft)	Depth (ft)	Top Area (acre)	Bottom Area (acre)	Excavated Volume (cy)	Excavation Unit Cost (\$/cy)	ROW Width (ft)	Landscape Unit Cost (\$/sf)	Landscape Cost	Land Acquisition (acre)	Land Acquisition Cost (\$/acre)	Total Cost
51st Avenue and Baseline	33	8	10	3.4	60500	\$6.00	NOTE below	\$1.00	\$551,760	13	\$27,000	\$1,265,760
Dobbins and 43rd Avenue	65	10	10	3.1	10200	\$6.00	"	\$1.00	\$551,760	13	\$27,000	\$963,960
Dobbins and 51st Avenue	18	5	10	4.0	31300	\$6.00	"	\$1.00	\$551,760	13	\$27,000	\$1,090,560
Elliot and 47th Avenue	27	6	10	3.8	46200	\$6.00	"	\$1.00	\$551,760	13	\$27,000	\$1,179,960
Carver Hills and 43rd Avenue	100	10	20	2.9	181500	\$6.00	"	\$1.00	\$1,035,408	24	\$27,000	\$2,772,408
FRWY Alignment (Southwest South Mountain)	420	12	40	33.0	707200	\$6.00	"	\$1.00	\$1,974,720	46	\$27,000	\$7,459,920
NOTE: Assume 44ft wide all around basin to accommodate 24ft maintenance road and embankment transition.												\$14,732,568

Storm Drain Costs

Segment	Diameter (in)	Material	Length (ft)	Unit Cost (\$/ft)	Total Storm Drain Costs
FRWY Alignment (Force Main)	24	Concrete	6570	\$75.00	\$492,750
Hidden Valley	36	Concrete	3475	\$105.00	\$364,875
					\$857,625

Additional Features (e.g. pump stations, etc.)

Feature	Cost
Pump Station	\$260,000
NOTE: Includes equipment, piping, controls, and electrical system.	

Total Costs

Flood Control Feature	30% Cost Contingency	Total Cost
Channel Costs	\$2,086,343	\$9,040,821
Culvert Costs	\$348,735	\$1,511,185
Storm Drain Costs	\$257,288	\$1,114,913
Basin Costs	\$4,419,770	\$19,152,338
Other Features Costs	\$78,000	\$338,000
		\$31,157,257